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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,874	08/04/2003	Brian G. Johnson	ITO.0047US (P16202)	5272

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EXAMINER

FORDE, REMMON R

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,874

Applicant(s)

JOHNSON, BRIAN G.

Examiner

Remmon R. Fordé

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-10,12,13,16 and 22-26 is/are rejected.
- 7) ☒ Claim(s) 2,7,11,14,15 and 17-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/07/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

A Brief Summary section is missing from the Specification.

Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

On page 10, line 23, change "Figure 5" to ---Figure 12---.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 22, line 3, "said processor-based device" lacks proper antecedent basis.

In claim 26, line 1, "said wireless antenna" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 8-10, 12, 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Reinberg.

Regarding claim 1, referencing Figures 1-3, Reinberg discloses a method of forming a memory device provided with the steps of forming a phase change material (30) between a pair of horizontally spaced electrodes (34 & 32). (Column 4, lines 35-37.)

Regarding claim 3, referencing Figures 1-3, Reinberg further discloses forming a conductive line (18 or 16) in a substrate (26) and forming the material (30) and the electrodes (34 & 32) over the substrate (26). (Column 4, lines 10-37.)

Regarding claim 4, referencing Figures 1-3, Reinberg further discloses forming a selection device (20) in the substrate (26). (Column 4, lines 10-37.)

Regarding claim 5, referencing Figures 1-3, Reinberg further discloses forming an electrical connection from the substrate to a second electrode (16). (Column 4, lines 10-47.)

Regarding claim 6, referencing Figures 1-3, Reinberg further discloses electrically coupling the second electrode (16) to one of the horizontally displaced electrodes (32). (Column 4, lines 10-47.)

Regarding claim 8, referencing Figures 1-3, Reinberg further discloses forming two pairs of electrodes for two spaced dells at the same time. (Column 4, lines 10-47.)

Regarding claims 9 and 10, referencing Figures 1-3, Reinberg further discloses depositing a material to form the electrodes in a trench (42). (Column 4, lines 10-47.)

Regarding claim 12, referencing Figures 1-3, Reinberg further discloses a memory device (10) provided with a pair of horizontally spaced electrodes (34 & 32); and a phase change material (30) between the pair of horizontally spaced electrodes (34 & 32). (Column 4, lines 10-37.)

Regarding claim 13, referencing Figures 1-3, Reinberg further discloses providing that the spaced electrodes (34 & 32) and the phase change material (30) are formed over a substrate (26) having a horizontally disposed upper surface. (Column 4, lines 10-37.)

Regarding claim 16, referencing Figures 1-3, Reinberg further discloses that the phase change material (30) is a chalcogenide material. (Column 4, lines 10-37.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22-24 and 26, insofar as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinberg in view of Reinberg et al..

Referencing Figures 1-3, Reinberg discloses a semiconductor memory device (10); wherein the memory device is provided with a phase change material (30) and a pair of horizontally spaced electrodes (34 & 32) sandwiching the phase change material (30). (Column 4, line 10 – Column 5, line 55.)

Reinberg fails to further disclose a system comprising a controller, a wireless interface and coupling the memory device (20) to the wireless interface.

However, referencing Figures 1 and 2, Reinberg et al. discloses a system (10) comprising a controller (16) (i.e. periphery circuitry), a wireless interface (16) (i.e. periphery circuitry) and coupling a memory device (14) to the wireless interface (16). Reinberg et al. further teaches that the periphery circuitry is provided so that the memory device can be addressed for storing and retrieving data and to insure proper functioning of the memory device (Column 5, lines 34-63.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the periphery circuitry (i.e. a wireless interface and a controller) as disclosed by Reinberg et al. for the memory device as disclosed by

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Reinberg because Reinberg et al. teaches that the periphery circuitry is provided so that the memory device can be addressed for storing and retrieving data and to insure proper functioning of the memory device (Column 5, lines 34-63.)

Allowable Subject Matter

Claims 2, 7, 11, 14, 15, 17-21 and 25 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kozicki et al., Klersy et al., Zahorik et al., Shanks and Lee et al. each disclose memory device provided with phase change material.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Remmon R. Fordé whose telephone number is (571) 272-1916. The examiner can normally be reached on Monday-Thursday (8:00-6:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Remmon R. Fordé


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